

PATENT COOPERATION TREATY

**PCT**

**INTERNATIONAL SEARCH REPORT**

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>150388/KB</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/CZ2004/000085</b>	International filing date (day/month/year) <b>14/12/2004</b>	(Earliest) Priority Date (day/month/year) <b>16/12/2003</b>

Applicant

**PLIVA-LACHEMA A.S.**

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b.  With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2.  Certain claims were found unsearchable (See Box II).

3.  Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. \_\_\_\_\_

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b.  none of the figures is to be published with the abstract.

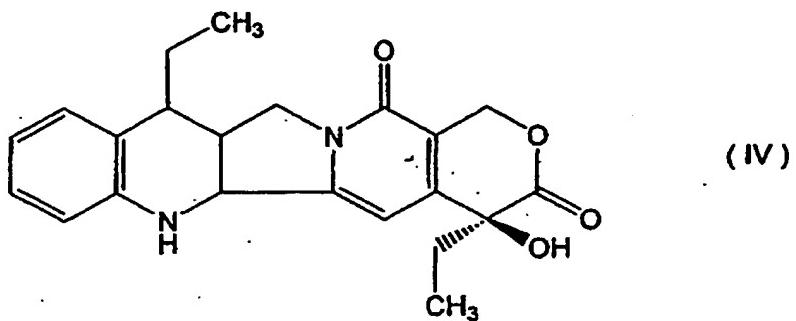
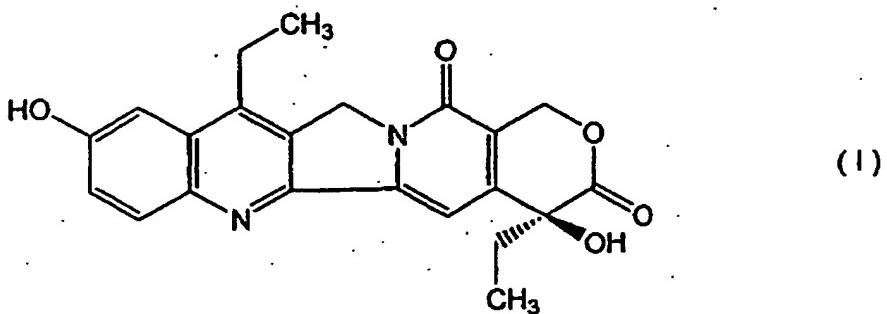
## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CZ2004/000085

Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The method of manufacturing of 7-ethyl-10-hydroxycamptothecin of formula I characterized in that 7-ethyl-1,2,6,7-tetrahydrocamptothecin of formula IV is oxidized with an oxidizing agent selected from the group comprising iodosobenzene, an ester of iodosobenzene, sodium periodate, potassium periodate, potassium peroxodisulfate and ammonium peroxodisulfate, in a solvent formed by a saturated aliphatic monocarboxylic acid containing 1 to 3 carbon atoms, and in the presence of water.



## INTERNATIONAL SEARCH REPORT

International Application No PCT/CZ2004/000085
---

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D491/22

//(C07D491/22, 311:00, 221:00, 221:00, 209:00)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WOOD J L ET AL: "An Efficient Conversion of Camtothecin to 10-Hydroxycamptotheccin" JOURNAL OF ORGANIC CHEMISTRY, AMERICAN CHEMICAL SOCIETY, EASTON, US, vol. 60, 1995, pages 5739-5740, XP002323603 ISSN: 0022-3263 page 5739, right-hand column, paragraph 1 - page 5740, left-hand column, last paragraph; examples; compounds 4,2	1-22
Y	US 4 473 692 A (MIYASAKA ET AL) 25 September 1984 (1984-09-25) column 7, line 11 - line 62; claim 37; example 7 column 9, line 28 - line 64	1-22 -/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

- \*&\* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

7 April 2005

19/04/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Härtinger, S

1

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/CZ2004/000085

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 734 056 A (BURK ET AL) 31 March 1998 (1998-03-31) column 4, line 33 – column 5, line 67; claim 1; example 6 column 10, line 34 – column 12, line 46 -----	1-22
P,X	WO 2004/100897 A (SCINOPHARM TAIWAN, LTD) 25 November 2004 (2004-11-25) page 3 – page 5; claim 2 page 6, line 3 – page 7, line 17 page 4, line 25 – line 28 -----	1-22

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/CZ2004/000085

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4473692	A 25-09-1984	JP 1460819 C JP 58134095 A JP 63006070 B JP 1460820 C JP 58152888 A JP 63006071 B JP 1438947 C JP 58039683 A JP 62047193 B JP 1438948 C JP 58039684 A JP 62047194 B CA 1246576 A1 DE 3274351 D1 EP 0074256 A1 US 4545880 A BR 1100879 A3	14-10-1988 10-08-1983 08-02-1988 14-10-1988 10-09-1983 08-02-1988 19-05-1988 08-03-1983 06-10-1987 19-05-1988 08-03-1983 06-10-1987 13-12-1988 08-01-1987 16-03-1983 08-10-1985 14-03-2000
US 5734056	A 31-03-1998	AT 186461 T AU 664830 B2 AU 8739991 A CA 2090967 A1 CN 1062731 A ,C CZ 9300515 A3 DE 69131775 D1 DE 69131775 T2 DK 547165 T3 EP 0547165 A1 ES 2137932 T3 FI 931384 A GR 3031823 T3 HK 1012283 A1 HU 70024 A2 IE 913402 A1 IL 99571 A JP 2848958 B2 JP 6501476 T NO 931153 A NZ 239947 A PT 99109 A ,B SI 9111599 A SK 25993 A3 WO 9205785 A1 ZA 9107748 A	15-11-1999 07-12-1995 28-04-1992 29-03-1992 15-07-1992 19-01-1994 16-12-1999 20-04-2000 27-03-2000 23-06-1993 01-01-2000 26-03-1993 29-02-2000 21-07-2000 28-09-1995 08-04-1992 31-08-2000 20-01-1999 17-02-1994 26-03-1993 26-07-1994 31-08-1992 28-02-1998 07-07-1993 16-04-1992 30-09-1992
WO 2004100897	A 25-11-2004	US 2004235878 A1 WO 2004100897 A2	25-11-2004 25-11-2004